

unsaturated dicarboxylic acid and a C_{8-24} α -olefin the acid groups of which are esterified with an ethoxylated alcohol having a degree of ethoxylation of 1-45 and the ethoxylated fatty alcohol.

A2 3. The emulsion according to claim 1 wherein the peroxide is selected from the group consisting of peroxyesters, peroxydicarbonates, peroxycarbonates, diacyl peroxides, and combinations thereof, and in which said peroxide is present in an amount of 30-70% by weight, based on the weight of the emulsion.

A3 4. The emulsion according to claim 3 comprising one or more peroxides which require refrigerated storage and are present in an amount of 40-65% by weight, based on the weight of the emulsion.

5. The emulsion according to claim 4 further comprising an anti-freeze selected from the group consisting of methanol, ethanol, isopropanol, ethylene glycol, propylene glycol, and glycerol.

A4 6. The emulsion according to any one of the claims 1-5 wherein the copolymer is present in an amount of 0.05 to 20% by weight and the ethoxylated fatty alcohol is present in an amount of 0.02-15% by weight, while the total weight of both compounds is at least 0.5% by weight, all based on the weight of the peroxide in said emulsion.

AS 7. The emulsion according to claim 6 wherein the copolymer is present in an amount of 0.1-15% by weight, based on the weight of the peroxide.

AG 8. The emulsion according to any one of claims 1-5 wherein

the HLB value of the ethoxylated fatty alcohol is greater than 16.5.

9. The emulsion according to any one of claims 1-5 wherein the droplet size of the emulsion, when measured using a Malvern Easy Sizer, is characterized by a d50 of 0.1-2.0 μm and a d99 of 0.5-9.0 μm .

AG 10. The emulsion according to any one of claims 1-5 with a viscosity of 10-300 mPa.s.

11. A polymerization process comprising the polymerization of a monomer in the presence of an emulsion according to any one of claims 1-5 or a polymerisation modification process comprising treating a polymer with an emulsion according to any one of claims 1-5.

12. Polyvinyl chloride obtained by a process involving the reaction of at least vinyl chloride monomer and a peroxide that was used in the form of an emulsion according to any one of claims 1-5.

Add the following new Claims:

13. The emulsion according to claim 3 comprising one or more peroxides which require refrigerated storage and are present in an amount of 50-65% by weight, based on the weight of the emulsion.

AM 14. The emulsion according to claim 6 wherein the copolymer is present in an amount of 0.2-10% by weight, based on the weight of the peroxide.

15. The emulsion according to any one of claims 1-5 wherein the HLB value of the ethoxylated fatty alcohol is greater than 17.0.